



DEPARTMENT OF ENVIRONMENTAL QUALITY  
POLICY AND PROCEDURE

SUBJECT: INDOOR AIR QUALITY (IAQ)  
Date: November 14, 2003

Number: 07-004  
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**ISSUE:**

The Department of Environmental Quality (DEQ) issues this *interim* Indoor Air Quality policy and procedure to provide immediate guidance to DEQ employees. It is the intent of the DEQ to review this interim policy on an ongoing basis and adjust it, as necessary, in light of newly-issued statewide standards or guidance relative to indoor air quality that do not exist at the present time.

The purpose of this policy is to ensure that reported indoor air quality concerns receive prompt and adequate response and to provide guidelines for a comprehensive, systematic diagnostic evaluation of conditions. This policy is not intended to create a one-size-fits-all solution as each issue shall be handled on a case-by-case basis.

**DEFINITIONS:**

None

**POLICY:**

1. All reports, complaints, or concerns involving odors (real or perceived), airborne contaminants, or the overall quality of air within any Department of Environmental Quality (DEQ) workplace shall be directed to the DEQ's Space Administrator and/or to the DEQ's Health and Safety Officer prior to the division taking any action to remedy the situation unless it is otherwise defined as being an emergency. This includes any and all equipment purchases or requests to use personal apparatuses, devices, gear, kits, machinery, tackle, tools, etc.
2. To encourage open communication and to assist the responding person(s) in obtaining specific information about the nature of the complaint or concern, the DEQ's Space Administrator and/or the DEQ's Health and Safety Officer will correspond with the affected employee(s), their immediate supervisor(s), or other person(s) within five (5) business days of becoming aware of such report, complaint, or concern.
3. The DEQ's Space Administrator and/or the DEQ's Health and Safety Officer will determine whether or not to conduct a thorough tour (i.e., visual walk-through) of the area(s) in question for the purpose(s) of collecting information to resolve the indoor air quality complaint and to prevent it from recurring. Upon completion of the data collecting phase, a proposed action plan (to include any potential root causes, contributing environmental factors or stressors, and any perceived risks associated with the execution of such action plan) shall be prepared and presented to one or more of the appropriate parties, identified



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below, for consideration. These parties include: DEQ's Space Administrator, the Financial and Business Services Division's (FBSD's) Field Operations Coordinator (if such decision includes a field or district office), Director of Personnel Services, Labor Relations Manager, DEQ's Health and Safety Officer, and/or the immediate supervisor for individual employee-related issues;

- Division management or designee if the associated expenditure is to be paid by the office/division, issue can be resolved without becoming precedent setting, or unilaterally affecting the entire DEQ; or,
- A committee comprised of the Deputy Directors, Executive Assistant to the Director, the FBSD Office Chief, and the Director of Personnel Services when the proposed recommendations have the potential to have department-wide impact or be precedent setting.

**Note:** *Outside industrial hygiene, heating and air conditioning (HVAC), or environmental services may be sought to assist in the application of technical and scientific disciplines, such as monitoring and testing for specific contaminants. The decision to seek outside services shall depend on the urgency of the situation, properties and hazards potentially involved, and/or acuity of symptoms exhibited by affected employees.*

- 4 DEQ's Space Administrator and/or DEQ's Health and Safety Officer will plan, prepare, and implement or oversee the execution of such action plan as appropriate.
- 5 DEQ's Space Administrator and/or DEQ's Health and Safety Officer will relay any progress, significant findings, conclusions, or future actions to be taken, to include, but not limited to systems/process modification, administrative controls, etc. Such information shall be communicated minimally every thirty (30) business days and/or prior to the implementation of such action plan.
6. The DEQ's Health and Safety Officer will establish a tracking system or other means to monitor progress, actions taken, follow-up, and/or to record.

**GENERAL INFORMATION:**

(Source: <http://www.epa.gov>)

**What Do I Do if I am Exposed to Indoor Air Quality Contaminants?**

Any exposure incident is to be treated as a work-related injury or illness. Employees alleging exposure must complete the Employee Accident/Injury/Illness report ([EQ1099E](#)) and forward copies to their immediate supervisor and the Office of Personnel Services with twenty-four (24) hours of said exposure. This form can



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be obtained from the immediate supervisor, Division Health and Safety Coordinator, DEQ's Health and Safety Coordinator, and/or is located on the DEQ template (Word, File, New, General Templates, Personnel).

*Refer to DEQ Policy 3.14 (i.e., Accident, Injury or Illness Reporting) for more information.*

### **What is a Thorough Tour or Visual Walk-Through?**

A thorough tour or visual walk-through is an indoor air quality investigation procedure best characterized as a cycle of information gathering, hypothesis formation, and hypothesis testing. It generally begins with a walk-through inspection of the problem area to provide information about the four basic factors that influence indoor air quality. They are:

- People;
- Pollutants;
- Pressure HVAC systems and pressure relationships; and,
- Pollutant Pathways

Preparation for a walk-through may include documenting easily obtainable information about the history of the building and of the complaints; identifying known HVAC zones and complaint areas; and, identifying key individuals needed for information and access. The walk-through itself entails visual inspection of critical building areas and consultation with employees.

### **What Causes Indoor Air Quality Issues?**

Indoor air quality is typically influenced by one or more of the following factors:

- People, meaning employees and their activities or behaviors;
- Pollutants, meaning contaminants that are within or have entered the facility through poorly located air intake vents, windows, or other openings. For example: adhesives, carpeting, upholstery, manufactured wood products, copy machines, pesticides, cleaning agents, tobacco smoke, motor vehicle exhaust, or unventilated kerosene and gas space heaters, woodstoves, fireplaces, and gas stoves;
- Pressure HVAC systems and pressure relationships, meaning ventilation conditions (i.e., heating and air conditioning ventilation) that can potentially move contaminants from one area to another; and,
- Pollutant Pathways are potential avenues of dispersion or migration of airborne contaminants. For example: stagnant water that has accumulated in planters, ducts, humidifiers, and drain pans, or where water has collected on ceiling tiles, carpeting, or insulation.



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**How Does the DEQ Become Aware of Questionable Building Issues?**

There are numerous ways that the DEQ becomes informed of indoor air quality issues. These methods may include, but are not limited to:

- An employee files a grievance and/or the collective bargaining unit (i.e., union) raises the issue;
- An employee filing an accident, injury or illness report (i.e., Workers Compensation claim);
- An employee reports symptoms of illness to division personnel, their immediate supervisor, Division Health and Safety Coordinator, the FBSD Field Operations Coordinator, the DEQ's Space Administrator and/or the DEQ's Health and Safety Officer;
- An employee requests a Reasonable Accommodation as defined by the American's with Disabilities Act; and,
- The issue becomes known through the DEQ's Health and Safety Committee, joint DEQ/Collective Bargaining Health and Safety Meeting, or Labor Management Meeting.

**Why Isn't Indoor Air Quality Testing Conducted Upon Becoming Aware of an Alleged Indoor Air Quality Issue?**

Although air sampling for contaminants might seem to be the logical response to employee-related complaints, it seldom provides information about possible causes.

While certain basic measurements such as temperature, relative humidity, carbon dioxide, and air movement, can provide a useful "snapshot" of current building conditions, sampling for specific pollutant concentrations is often not required to solve the problem and can even be misleading. Contaminant concentration levels rarely exceed permissible exposure levels even when employees continue to report health complaints. Air sampling should not be undertaken until considerable information on the factors listed above has been collected, and any sampling strategy should be based on a comprehensive understanding of how the building operates and the nature of the complaints.

**What Factors are used in Determining Whether or Not to Conduct Indoor Air Quality Testing?**

Any action plan that involves a decision to perform the indoor air quality testing may include, but are not limited to the following factors:

- Annual and sick leave usage;
- Changes in levels of absence;



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- Employees being affected on one floor, but not another;
- Location of those making claims;
- Material Safety Data Sheets regarding chemicals used at the location;
- Number of staff with documented medical conditions allegedly connected to the building/office or its contents;
- Sufficient medical documentation (from individual employee) to support injury/illness from the building or its contents; and,
- Sufficient physical evidence to support potential building issues (e.g., visual signs of dust, mold, water marks, location of plumbing, history of repairs, smells, ventilation system, air circulation, humidity levels, temperatures, cleanliness, clutter, etc.).

**Factors for Determining an Independent Medical Examination (IME)**

The following list is not intended to be used as an all inclusive list as each request shall be determined by either the Office of Personnel Services, C.O.R.E. (i.e., Long Term Disability Carrier), Citizens Management, Inc. (i.e., Worker's Compensation Carrier), or designee. All requests for an IME shall be handled on a case-by-case basis. Examples of determining factors may include, but are not limited to:

- Annual and sick leave usage;
- Changes in levels of absence;
- Employees being affected on one floor, but not another;
- Insufficient medical documentation;
- Location of those making claims; Number of employees allegedly affected with supporting medical documentation;
- Number of employees allegedly affected;
- Potential impact of the employee or those within the immediate area taking into account previous steps already taken toward resolution;
- Questionable medical;
- Resources requested to remedy the alleged health risk are in question; or,
- Seriousness of the alleged illness or injury.

**Are there Solutions to Address Indoor Air Quality Issues?**

In short, the answer is yes. Solutions to indoor air quality issues typically include combinations of the following:

Pollutant source removal or modification. An effective approach when sources are known and control is feasible. Examples include routine maintenance of HVAC systems such as periodic cleaning and replacement of filters, institution of smoking restrictions, allowing time for building materials in new or remodeled areas to gas-off pollutants before occupancy, etc.;



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- Increasing ventilation rates and air distribution. Local exhaust ventilation is particularly recommended to remove pollutants that accumulate in specific areas such as restrooms, copy rooms, and printing facilities;
- Air cleaning; and,
- Education and communication. Remedial and preventive indoor air quality management is most effective when employees, division management, field operations, DEQ's Space Administrator, DEQ's Health and Safety Officer, and/or building maintenance personnel fully communicate and understand the cause and consequences of indoor air quality problems.

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Approved: \_\_\_\_\_

Date: \_\_\_\_\_

11-17-03